

Introduction to Memory

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Reading:

UoA text, Chapter 8, *Memory: Living with
Yesterday*
(especially pp. 262-263)

Looking at extremes ... amnesia

- Anterograde amnesia
- Retrograde amnesia

Looking at extremes ... amnesia

- Anterograde amnesia
 - inability to form new memories
- Clive Wearing
 - case description: *not* the 'flu, but herpes simplex encephalitis
 - prisoner of consciousness - 'just awakening'

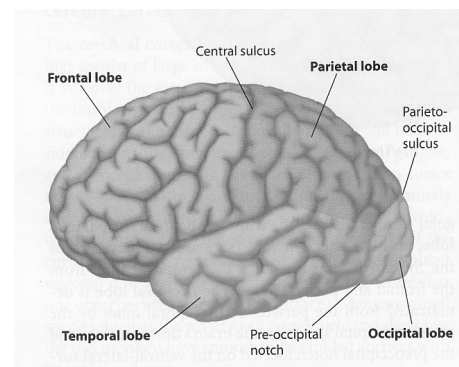
Clive Wearing

- Memory features
 - profound inability to remember new information
 - Use of diaries
 - inability to remember old information (retrograde amnesia)
 - Confabulation
 - immediate memory span was normal

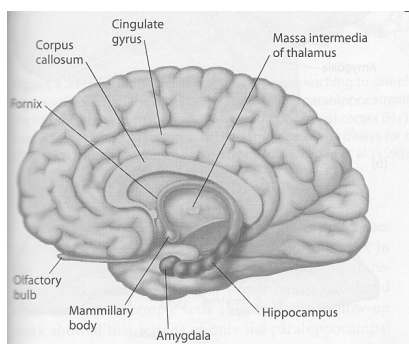
Anterograde amnesia

- H.M.
 - surgery for relief of epilepsy
 - 'every day is alone in itself'
 - immediate memory span is normal
- Clive Wearing & HM - trapped in the present
- Which brain areas are affected in H.M & Clive Wearing?
 - temporal lobes, hippocampus

Temporal Lobes



Hippocampus



An important qualification concerning anterograde amnesia

- Declarative memory
 - remembering 'that'
- vs.
- Procedural memory
 - remembering 'how'

Retrograde Amnesia (RA)

- Inability to remember events prior to brain trauma
- PS (McCarthy & Hodges)
 - case description
 - profound loss of autobiographical memory
 - trapped in the distant past

Retrograde Amnesia

- Ritchie Russell & Nathan's case
 - Motorcycle accident
 - Shrinkage of RA period
 - Remote memories recovered first
 - Permanent loss of memory for events immediately before accident

Retrograde Amnesia

- Yarnell & Lynch's study
 - Concussion during American football
 - Failure to consolidate memory

A theoretical explanation

- Working memory
 - Also known as short term memory
- vs. Long Term Memory
 - permanent memory for information & events

Summing up

- Anterograde vs. retrograde amnesia

- Working memory vs. long term memory

- Declarative memory (hippocampus, temporal lobes) vs. procedural memory